QC ABSTRACT

NAME OF WORK: Providing UGD Work System in Ward No:01 of Yelahanka Sub Division.

SL NO	Item Of Work	Name of Test	Frequency of Test/Quantity	Executed Quantity	Number of Tests Required	Number of Tests Conducted
		Materials				
1	Cement	Fineness by dry sieving	One Test		1	1
		Finess by Air permeablity method	One Test		1	1
		Density	One Test		1	1
		Standard Consistency	One Test		1	1
		Initial Setting time	One Test		1	1
		Final Setting time	One Test		1	1
		Soundness (Le Chatelier's Method)	One Test		1	1
		Compressive Strength	One Test		1	1
2	Coarse aggregate(40 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
3	Coarse aggregate(20 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
		Aggregate crushing Value	One Test		1	1
		Aggregate Impact Value	One Test		1	1
4	Fine aggregate	SIEVE ANALYSIS	One Test		1	1
		Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
5	Brick	Compressive Strength	One Test		1	1
		WATER ABSORPTION	One Test		1	1
		EFFLORESCENCE	One Test		1	1
		DIMENSIONS AND TOLERANCES	One Test		1	1

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	CP-2020-11-19-38 **Date: 13-07-20**
Customer	:	Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
Address	:	Yelahanka Sub Division, BBMP, Bangalore.
Project Name	:	Providing UGD Work System in Ward No:01 of Yelahanka Sub Division.
Agency	:	Sri.Rajeswaren Sateesh (sathya Constructions), No:600, Down Bazaar Road, Yelahanka, Bangalore-64
Customer's Reference	:	EE(YNK.D)E-PMT-08/W.O/146/2018-19
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	10-07-20
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 (Part 1,2 3,4,5, 6,11):1988 IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4 IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5 IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6 IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5 IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6
Date of test	:	11-07-20
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	1.95	–
2	Finess by Air permeablity method (m^2/kg,Min)	285.4	225m^2/kg, Min
3	Density (gm/cc)	3.12	–
4	Standard Consistency (%)	29.5%	Not specified
5	Initial Setting time	145 minutes	Not less than 30 minutes
6	Final Setting time	240 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	1.5mm	Not more than 10 mm

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* The results obtained are satisfactory as per standard requirements.

Note:

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2020-11-19-38** **Date: 08-08-20**
Customer	:	Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
Address	:	Yelahanka Sub Division, BBMP, Bangalore.
Project Name	:	Providing UGD Work System in Ward No:01 of Yelahanka Sub Division.
Agency	:	Sri.Rajeswaren Sateesh (sathya Constructions), No:600, Down Bazaar Road, Yelahanka, Bangalore-64
Customer's Reference	:	EE(YNK.D)E-PMT-08/W.O/146/2018-19
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	10-07-20
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 6, Determination of Compressive Strength, Clause 6
Date of test	:	11-07-20
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Compressive Strength			
Sl.No.	**Physical properties**	**Results**	**Requirement as per IS 12269: 2013**
1	3 Days	28.5N/mm^2	Not less than 27 N/mm^2
2	7 Days	39.0N/mm^2	Not less than 37 N/mm^2
3	28 Days	58.5N/mm^2	Not less than 53 N/mm^2

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TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2020-11-19-38** **Date: 13-07-20**
Customer	:	Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
Address	:	Yelahanka Sub Division, BBMP, Bangalore.
Project Name	:	Providing UGD Work System in Ward No:01 of Yelahanka Sub Division.
Agency	:	Sri.Rajeswaren Sateesh (sathya Constructions), No:600, Down Bazaar Road, Yelahanka, Bangalore-64
Customer's Reference	:	EE(YNK.D)E-PMT-08/W.O/146/2018-19
Source of Sample	:	Sample supplied by Agency
Sample condition	:	Satisfactory
Date of Receipt	:	10-07-20
Sample Type	:	40mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	10-07-20

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SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : **15000** **grams**

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	244	244	1.6	98.4	90-100
3	20 mm	5432	5676	37.8	62.2	30-70
4	10 mm	4332	10008	66.7	33.3	10-35
5	4.75 mm	4654	14662	97.7	2.3	0-5
6	Pan	338	15000	100.0	0	---

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2020-11-19-38** **Date: 13-07-20**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	12.4	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	11.8	
3	Specific Gravity	2.68	–
4	Bulk Density(Loose) (Kg/l)	1.48	–
5	Bulk Density(Compacted) (Kg/l)	1.52	–
6	Water Absorption(%)	0.22	–

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TEST REPORT ON COARSE AGGREGATES

Date: 12-07-20

Lab ID	:	CP-2020-11-19-38
Customer	:	Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
Address	:	Yelahanka Sub Division, BBMP, Bangalore.
Project Name	:	Providing UGD Work System in Ward No:01 of Yelahanka Sub Division.
Agency	:	Sri.Rajeswaren Sateesh (sathya Constructions), No:600, Down Bazaar Road, Yelahanka, Bangalore-64
Customer Reference	:	EE(YNK.D)E-PMT-08/W.O/146/2018-19
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	10-07-20
Sample Type/ Size	:	20mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	10-07-20

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SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	245	245	4.9	95.1	90-100
3	10 mm	2560	2805	56.1	43.9	25-55
4	4.75 mm	2033	4838	96.8	3.2	0-10
5	Pan	162	5000	100	0	-

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TEST REPORT OF FINE AGGREGATE

Date: 13-07-20

Lab ID	:	CP-2020-11-19-38
Customer	:	Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
Address	:	Yelahanka Sub Division, BBMP, Bangalore.
Project Name	:	Providing UGD Work System in Ward No:01 of Yelahanka Sub Division.
Agency	:	Sri.Rajeswaren Sateesh (sathya Constructions), No:600, Down Bazaar Road, Yelahanka, Bangalore-64
Customer's Reference	:	EE(YNK.D)E-PMT-08/W.O/146/2018-19
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	10-07-20
Sample Type	:	Fine Aggregate
Reference to BIS codes	:	IS 383 : 2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1, 3) RA2012 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption
Date of test	:	10-07-20
Total weight taken	:	1000 grams

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Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0.0	100.0	100	100	100	100
2	4.75 mm	27	27	2.7	97.3	90-100	90-100	90-100	95-100
3	2.36 mm	55	82	8.2	91.8	60-95	75-100	85-100	95-100
4	1.18 mm	239	321	32.1	67.9	30-70	55-90	75-100	90-100
5	600 micron	205	526	52.6	47.4	15-34	35-59	60-79	80-100
6	300 micron	203	729	72.9	27.1	5-20	8-30	12-40	15-50
7	150 micron	191	920	92.0	8.0	0-10	0-10	0-10	0-15
8	Pan	80	1000	100.0	0.0	---	---	---	---

Result :The tested Sample Conforms to Grading Zone II

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TEST REPORT OF PHYSICAL REQUIREMENTS OF BRICKS

Lab ID	:	CP-2020-11-19-38	**Date:** 20-07-20
Customer	:	Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.	
Address	:	Yelahanka Sub Division, BBMP, Bangalore.	
Project Name	:	Providing UGD Work System in Ward No:01 of Yelahanka Sub Division.	
Agency	:	Sri.Rajeswaren Sateesh (sathya Constructions), No:600, Down Bazaar Road, Yelahanka, Bangalore-64	
Customer's Reference	:	EE(YNK.D)E-PMT-08/W.O/146/2018-19	
Source of sample	:	Sample supplied by Agency	
Sample Condition	:	Satisfactory	
Date of Receipt	:	14-07-20	
Identification Mark on Brick	:	Wire Cut Brick	
Reference to BIS codes	:	IS 1077 : 1992(RA 2011) Common Burnt Clay Building Bricks-Specification IS 3495 (Part 1 to 3) : 1992(RA 2011) Method of Tests Burnt Clay Building Bricks Part 1:Determination of Compressive Strength, (Cl 4.2.3) Part 2:Determination of Water Absorption,(Cl 4.1.3) Part 3: Determination of Efflorescence, (Cl 4)	
Date of test	:	14-07-20	

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COMPRESSIVE STRENGTH

Sl.No.	Length (mm)	Breadth (mm)	Area (mm^2)	Failure Load (KN)	Compressive strength of individual bricks (N/mm^2)	Acceptablity as per IS 1077:1992, Clause 7.1
1	228.13	109.98	25090	206.7	8.2	The bricks shall have a minimum average compressive strength for various classes as given in Table 1 of IS 1077: 1992. The compressive strength of any individual bricks shall not fall below the minimum compressive strength specified for the corresponding class of brick by more than 15%.
2	228.98	108.62	24872	197.6	7.9	
3	231.01	107.99	24947	201.3	8.1	
4	230.11	107.54	24746	199.5	8.1	
5	228.16	106.98	24409	194.6	8.0	
Average of 5 bricks					8.1	

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Lab ID : CP-2020-11-19-38 Date: 20-07-20

WATER ABSORPTION:

Sl.No.	Dry Weight	Wet Weight	Water Absorption(%)	Acceptablity as per IS 1077:1992, Clause 7.2
1	2.975	3.265	9.7	The water Absorption of bricks shall not be more than 20% by weight upto class 12.5 and 15% by weight for higher classes.
2	2.868	3.176	10.7	
3	2.906	3.196	10.0	
4	2.976	3.275	10.0	
5	2.875	3.218	11.9	
Average Water Absorption(%)			10.5	

EFFLORESCENCE:

Sl.No.	Length (mm)	Breadth (mm)	Area (mm^2)	Efflorescence	Acceptablity as per IS 1077:1992, Clause 7.3
1	229.18	108.98	24976	Slight	The efflorescence shall not be more than 'moderate" upto class 12.5 and "slight" for higer classes.
2	228.98	109.18	25000	Moderate	
3	228.18	108.39	24732	Slight	
4	230.19	107.98	24856	Moderate	
5	228.13	109.19	24910	Slight	

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DIMENSIONS AND TOLERANCES

Sl.No.	Dimensions obtained for 20 bricks(mm)		Acceptability as per IS 1077:1992, Clause 6.2(b)
1	Length	4610	4520 to 4680 mm
2	Width	2185	2160 to 2240 mm
3	Height	1390	1360 to 1440 mm

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